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July 26, 2016

Dave Cook
RCH Group
11060 White Rock Road, Suite 150-A
Rancho Cordova, CA 95670

Re: Paleontological Records Search of the Whitehawk I and II sites, western Placer County

Dear Mr. Cook:

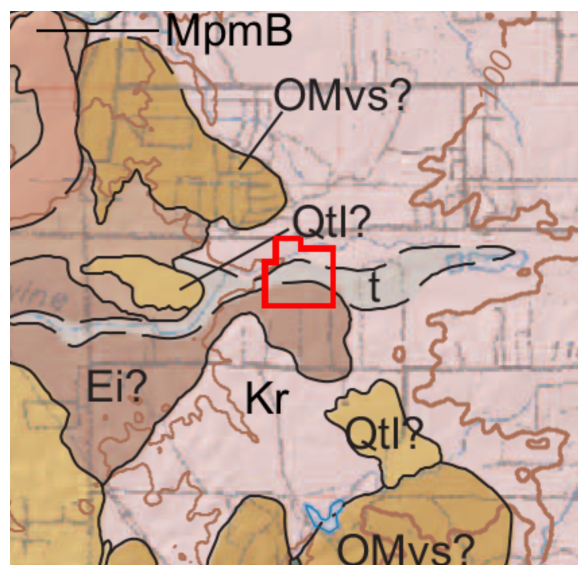
As per your request, I have conducted a search of the University of California Museum of Paleontology (UCMP) database for the Whitehawk I and II project sites in Granite Bay, Placer County. The adjacent projects are located is the south side of Douglas Road, just below its T-section with Seenoe Avenue.

Geologic Units

According to the geologic map compiled and digitized by Gutierrez (2011), the surface of the composite project site (outlined in red on the map portion below), from north to south, consists of the Rocklin Pluton (Kr), dredge tailings (t), and what is questionably identified as the Ione Formation (Ei?). The superposition of these units places the tailings on top of one or both of the other units, and the Ione? Formation on top of the pluton. Other units shown on the map will not be impacted by project construction activities.

Map Legend

t	Recent dredge tailings
Qtl	Quaternary landslide deposits
MpmB	Miocene Mehrten Fm. mudflow breccia
OMvs	Oligocene-Miocene Valley Springs Fm.
Ei	Eocene Ione Formation
Kr	Cretaceous Rocklin Pluton



The Rocklin Pluton consists solely of dioritic rocks, which are of intrusive igneous origin and therefore devoid of fossils. Although the tailings were most likely derived from the adjacent Ione? Formation, their status as disturbed deposits excludes them from paleontological evaluation. The identification of the third unit, the Ione? Formation, which was not questioned on the previous geologic map of Wagner et al. (1981), is a sedimentary unit and its paleontological potential needs is addressed below. A major part of the Ione Formation consists of freshwater (mostly fluvial) deposits, but some of the unit is estuarine and marine; these facies interfinger, and progradational parts of the sequence have been interpreted as deltaic complexes (Creely and Force, 2007). The unit is best known for its lignite coal, which accumulated in coastal swamps.

UCMP Database Records Search and Supplementary Data

I performed a records search on the UCMP (University of California Museum of Paleontology) today (July 24, 2016) and found that the only UCMP sites listed for Placer County are 24 Holocene plant localities. The UCMP database lists only one locality for the Ione Formation, which is in Sutter County and yielded a single marine microfossil (a planktic foraminifer). Hence, two of the three units on the surface or in the subsurface of the Whitehawk site lack any potential of yielding significant paleontological resources and therefore have no paleontological sensitivity. The database search results suggest that the potential and sensitivity of the Ione Formation is extremely low, but Noble's (1997) report on Gladstone Park (see adjacent map) refers to two Ione fossil localities in the vicinity, one about a mile southeast of the park that yielded an abundance of wood, leaves, nuts, and seeds (Hilton, 1994), and the other within a quarter-mile to the south (no citation provided). Earlier this year, I provided a records search for the Greyhawk III project adjacent to where the 2015 widening of Eureka Road uncovered large tree trunks 6-8 feet below the surface (see Anonymous, 2016 and Hales, 2016). In addition, Creely and Force (2007) mentioned that the unit has occasional leaves, marine mollusks, and trace fossils in its type area in Amador County.



Summary and Recommendations

The UCMP database lists no the vertebrate or plant localities in the Ione Formation within Placer County or the adjacent counties of El Dorado and Sacramento, which suggests that the unit is nonfossiliferous in this area. However, the large opalized tree trunks unearthed in the vicinity of the project site are significant paleontological resources. On that basis, the Ione Formation, which covers the southern third of the project site and likely

extends northward beneath the tailings, is currently assigned a high paleontological potential and sensitivity in this area. Whether the deltaic deposit with tree trunks extends into the Whiterock project area is presently unknown and awaits confirmation from the anticipated excavations.

In conclusion, I recommend paleontological monitoring of all earth-disturbing construction activities that will impact the Ione Formation. There is no need to monitor disturbance of the adjacent plutonic rocks or the overlying tailings.

Should any large specimens of petrified wood or dense deposits of leaves, or any vertebrate fossils, be unearthed by the construction crew, all work in the immediate vicinity of the find is to cease or be diverted until a paleontologist removes the find. If large, heavy specimens are encountered, it would be mutually advantageous for the construction crew to assist in their removal and relocation off the path of their activities. Any fossils collected from the project site should then be deposited in an accredited and permanent scientific institution (e.g., UCMP, Sierra College) where they will be properly curated and preserved for the benefit of current and future generations.

If I can be of further assistance on this project, please do not hesitate to contact me.

Sincerely,



References Cited

- Anonymous, 2016. Granite Bay construction unearths fascinating discovery. County of Placer Newsletter, January. <https://www.placer.ca.gov/news/2016/jan/granite-bay-construction-unearths-fascinating-discovery>
- Creely, S., and Force, E. R., 2001. Type region of the Ione Formation (Eocene), central California: stratigraphy, paleogeography, and relation to auriferous gravels. U.S. Geological Survey Open-File Report 2006-1378, 65 pp,
- Gutierrez, C., 2011. Preliminary geologic map of the Sacramento 30' X 60' Quadrangle, California. California Geological Survey.
http://www.conservation.ca.gov/cgs/rghm/rgm/preliminary_geologic_maps.htm
- Hales, J. P., 2016. Granite Bay's 40 million-plus fossil find. Roseville and Granite Bay Press Tribune, February 2, 2016.
- Hilton, R, 1994, The western Sierra to Donner-Pass. In: Hilton, R. (ed.) Guidebook to selected geologic fieldtrips in northern California. NAGT Far Western Section, Sierra College. p. 1–64.
- Noble, P. J., 1997. Assessment of paleontologic resources at Gladstone Park, Granite Bay, Placer County, California. Submitted to Mr. Robert E. Hayes, Land Planning Consultants, Roseville, CA.

Wagner, D.L., Jennings, C.W., Bedrossian, T.L., and Bortugno, E.J., 1981, Geologic map of the Sacramento quadrangle, California, 1:250,000: California Division of Mines and Geology, Regional Geologic Map 1A, scale 1:250,000.